

ABSTRACT

This invention relates to a three-stream atomizing nozzle for use with a rewet shower. The nozzle has an air stream divider that separates the atomizing air from the source into three streams. The first stream is a straight air stream staying closest to and around the atomized water jet. The second stream is a swirl running around the first straight stream. The third stream is also a straight stream that wraps around the first straight stream and the second swirl. The nozzle also has a mixing chamber in which the three air streams are mixed together for the atomizing purpose. The nozzle can from the combination of the three air streams produce fine water droplets that are suitable for a paper rewet shower and more importantly creates a tailorable water mass profile. The mass profile can be tailored into a shape that is close to a square shape which is ideal for rewet showers as a square profile creates minimal coupling between adjacent zones.